selecting two or more illuminating lights from the plural illuminating lights according to the second illuminating light;

generating data indicating a proportion of synthesis of conversion data for the selected plural illuminating lights, according to a manual instruction input by a user;

generating a conversion condition from the conversion data for the selected plural illuminating lights according to the data indicating the proportion of synthesis;

converting data dependent on the first illuminating light into data dependent on the second illuminating light, based on the conversion condition; and

providing a preview of a processing result of the generated conversion condition.

REMARKS

This Preliminary Amendment accompanies a Request For Continued Examination. Claim 1 to 9 and 19 to 23 are currently in the application, with Claims 1, 8, 9, 19, 22 and 23 being the independent claims. Entry of the foregoing amendment and further examination are respectfully requested.

In the Office Action dated May 6, 2002 (Paper No. 19), Claims 1 to 9 and 19 to 23 were rejected under 35 U.S.C. § 102(e) over U.S. Patent No. 5,710,876 (Peercy). Applicants have carefully considered the Examiner's comments and the applied reference and respectfully submit that the claims herein are patentably distinguishable over the applied reference for at least the following reasons.

The present invention concerns the conversion of data dependent on a first illuminating light into data dependent on a second illuminating light. According to one aspect of the invention, a first conversion condition is generated from conversion data for selected illuminating lights, where the illuminating lights are selected according to the second illuminating light, and a second conversion condition is generated based on color temperature information of the second illuminating light. The data dependent on the first illuminating light is converted into data dependent on the second illuminating light using the first and second conversion conditions.

With reference to particular claim language, independent Claims 1, 8 and 9 concern converting data dependent on a first illuminating light into data dependent on a second illuminating light. Conversion data for plural illuminating lights having different characteristics is stored and two or more illuminating lights are selected from the plural illuminating lights according to the second illuminating light. Data is generated indicating a proportion of synthesis of conversion data for the selected plural illuminating lights, corresponding to the second illuminating light and a first conversion condition is generated from the conversion data for the selected plural illuminating lights according to the data indicating the proportion of synthesis. A second conversion condition is generated based on color temperature information of the second illuminating light. Data dependent on the first illuminating light is converted into data dependent on the second illuminating light using the first conversion condition and the second conversion condition.

The applied reference is not understood to disclose the foregoing features of the present invention. In particular, the applied reference is not understood to disclose at

least the features of generating a first conversion condition from conversion data for selected illuminating lights, generating a second conversion condition based on color temperature information of a second illuminating light, and converting data dependent on a first illuminating light into data depending on the second illuminating light using the first and second conversion conditions.

Peercy concerns a computer system in which an image of an object is rendered based on sources of illumination and reflectance properties of the object. However, the rendering of the image disclosed in Peercy is not understood to utilize a first conversion condition generated from conversion data for selected illuminating lights and a second conversion condition generated based on color temperature information. Rather, Peercy is understood to disclose using full spectral data describing the illumination sources and the reflectance of the object to render the image for the object. Therefore, Peercy is not understood to disclose at least the features of generating a first conversion condition from conversion data for selected illuminating lights, generating a second conversion condition based on color temperature information of a second illuminating light, and converting data dependent on a first illuminating light into data depending on the second illuminating light using the first and second conversion conditions.

Accordingly, independent Claims 1, 8 and 9 are believed to be allowable over the applied reference.

According to another aspect of the present invention, data dependent on a first illuminating light is converted into data dependent on a second illuminating light using a conversion condition generated from conversion data for selected illuminating

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lights. Data indicating a proportion of synthesis of conversion data for the selected

illuminating lights is generated according to a manual instruction input by a user and the

conversion condition is generated in accordance with the generated data indicating a

proportion of synthesis. Furthermore, a preview of a processing result using the generated

conversion condition is provided thereby allowing the user to preview and accurately set

up the conversion condition.

With reference to particular claim language, independent Claims 19, 22 and

23 concern converting data dependent on a first illuminating light into data dependent on a

second illuminating light. Conversion data for plural illuminating lights having different

characteristics is stored and two or more illuminating lights are selected from the plural

illuminating lights according to the second illuminating light. Data indicating a proportion

of synthesis of conversion data is generated for the selected plural illuminating lights,

according to a manual instruction input by a user. A conversion condition is generated

from the conversion data for the selected plural illuminating lights according to the data

indicating the proportion of synthesis. Data dependent on the first illuminating light is

converted into data dependent on the second illuminating light based on the conversion

condition and a preview of a processing result of the generated conversion condition is

provided.

The applied reference is not understood to disclose the foregoing features of

the present invention. In particular, the applied reference is not understood to disclose at

least the features of generating data indicating a proportion of synthesis of conversion data

for selected illuminating lights according to a manual instruction input by a user and

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providing a preview of a processing result of a conversion condition generated according to the generated data indicating the proportion of synthesis of conversion data.

As discussed above, Peercy concerns a computer system in which an image of an object is rendered based on sources of illumination and reflectance properties of the object. The Office Action contends that the disclosure in Peercy, column 8, lines 55 to 61, of a user selecting illuminating sources corresponds to the feature of the present invention of generating data indicating a proportion of synthesis of conversion data for selected illuminating lights according to a manual instruction input by a user. Applicants respectfully disagree with this characterization. Peercy is understood to merely disclose the selection of illumination sources. Even though the spectral distribution of each of the selected light sources affects the image rendered in Peercy, merely selecting the illumination sources is not understood to affect the proportion of synthesis for each of the illumination sources. Rather, selecting the illumination sources is understood to only include the associated spectral distributions in the image rendering process and not to control the proportion of the spectral distributions used. Furthermore, Peercy is not understood to disclose providing a preview of a processing result. Therefore, Peercy is not understood to disclose at least the features of generating data indicating a proportion of synthesis of conversion data for selected illuminating lights according to a manual instruction input by a user and providing a preview of a processing result of a conversion condition generated according to the generated data indicating the proportion of synthesis of conversion data.

Accordingly, independent Claims 19, 22 and 23 are believed to be allowable over the applied reference.

The other claims in the application are dependent from the independent claims discussed above and are believed to be allowable over the applied reference for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

In view of the foregoing amendment and remarks, the entire application is believed to be in condition for allowance and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney may be reached in our Costa Mesa, California, office by telephone at (714) 540-8700. All correspondence should be directed to our address given below.

Respectfully submitted,

Andrew D. Mickelson
Attorney for Applicants

Registration No. 50,957

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-2200
Facsimile: (212) 218-2200

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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

1. (Four Times Amended) An image processing method for converting data dependent on a first illuminating light into data dependent on a second illuminating light, comprising the steps of:

storing conversion data for plural illuminating lights having different characteristics;

selecting two or more illuminating lights from the plural illuminating lights according to the second illuminating light;

generating data indicating a proportion of synthesis of conversion data for the selected plural illuminating lights, corresponding to the second illuminating light;

generating a first conversion condition from the conversion data for the selected plural illuminating lights according to the data indicating the proportion of synthesis;

generating a second conversion condition based on color temperature information of the second illuminating light; and

converting data dependent on the first illuminating light into data dependent on the second illuminating light using [color temperature information of] the first conversion condition and the second conversion condition [illuminating light].

8. (Four Times Amended) An image processing apparatus for converting data dependent on a first illuminating light into data dependent on a second illuminating light, comprising:

a data storing unit for storing conversion data for plural illuminating lights having different characteristics;

a processor for selecting two or more illuminating lights from the plural illuminating lights according to the second illuminating light;

an instructing unit for generating data indicating a proportion of synthesis of conversion data for the selected plural illuminating lights, corresponding to the second illuminating light;

a first calculating unit for generating a first conversion condition from the conversion data for the [plural] selected plural illuminating lights according to the data indicating the proportion of synthesis;

a second calculating unit for generating a second conversion condition based on color temperature information of the second illuminating light; and

a converting unit for converting data dependent on the first illuminating light into data dependent on the second illuminating light using [color temperature information of] the first conversion condition and the second conversion condition [illuminating light].

9. (Four Times Amended) A computer readable recording medium storing a program for converting data dependent on a first illuminating light into data dependent on a

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second illuminating light, said program comprising the steps of:

storing conversion data for plural illuminating lights having different

characteristics;

selecting two or more illuminating lights from the plural illuminating lights

according to the second illuminating light;

generating data indicating a proportion of synthesis of conversion data for

the selected plural illuminating lights, corresponding to the second illuminating light;

generating a <u>first</u> conversion condition from the conversion data for the

selected plural illuminating lights according to the data indicating the proportion of

synthesis;

<u>generating a second conversion condition based on color temperature</u>

<u>information of the second illuminating light;</u> and

converting data dependent on the first illuminating light into data dependent

on the second illuminating light using [color temperature information of] the <u>first</u>

conversion condition and the second <u>conversion condition</u> [illuminating light].

19. (Amended) An image processing method for converting data dependent

on a first illuminating light into data dependent on a second illuminating light, comprising

the steps of:

storing conversion data for plural illuminating lights having different

characteristics;

selecting two or more illuminating lights from the plural illuminating lights

according to the second illuminating light;

        generating data indicating a proportion of synthesis of conversion data for the selected plural illuminating lights, according to a manual instruction input by a user;

        generating a conversion condition from the conversion data for the selected plural illuminating lights according to the data indicating the proportion of synthesis; [and]

        converting data dependent on the first illuminating light into data dependent on the second illuminating light, based on the conversion condition; and

        providing a preview of a processing result of the generated conversion condition.

        20. (Amended) An image processing method according to claim 19 further comprising a step of inputting the manual instruction by the user using a user interface,

        wherein the user interface displays a patch that has been converted using the conversion condition.

        21. (Amended) An image processing method according to claim 19 further comprising a step of inputting the manual instruction by the user using a user interface,

        wherein the user interface displays an original image that has been converted using the conversion condition.

        22. (Amended) An image processing apparatus for converting data dependent on a first illuminating light into data dependent on a second illuminating light,

comprising:

a data storing unit for storing conversion data for plural illuminating lights having different characteristics;

a processor for selecting two or more illuminating lights from the plural illuminating lights according to the second illuminating light;

an instructing unit for generating data indicating a proportion of synthesis of conversion data for the selected plural illuminating lights, according to a manual instruction input by a user;

a calculating unit for generating a conversion condition from the conversion data for the selected plural illuminating lights according to the data indicating the proportion of synthesis; [and]

a converting unit for converting data dependent on the first illuminating light into data dependent on the second illuminating light, based on the conversion condition; and

a preview unit for providing a preview of a processing result of the generated conversion condition.

23. (Amended) A computer readable recording medium storing a program for converting data dependent on a first illuminating light into data dependent on a second illuminating light, said program comprising the steps of:

storing conversion data for plural illuminating lights having different characteristics;

selecting two or more illuminating lights from the plural illuminating lights according to the second illuminating light;

generating data indicating a proportion of synthesis of conversion data for the selected plural illuminating lights, according to a manual instruction input by a user;

generating a conversion condition from the conversion data for the selected plural illuminating lights according to the data indicating the proportion of synthesis; [and]

converting data dependent on the first illuminating light into data dependent on the second illuminating light, based on the conversion condition; and

providing a preview of a processing result of the generated conversion condition.